REMARKS

The above-referenced patent application has been amended and reconsideration and reeaxmination are requested. Claims 1-30 are pending in the patent application.

Applicants have amended the specification to correct grammatical errors and mislabeling associated with FIG. 8. Applicants have also made corresponding changes, marked in red, to FIG. 8. No new matter was added.

Independent claims 1, 9 and 20 have been amended to recite a method (claims 1 and 20) or system (claim 9) that includes servoing the optical pickup system to the recording medium (claim 1), servo means for driving the optical pickup system to a desired position (claim 9) and driving the optical pickup system to a desired position (claim 20). Among other advantages, the optical pickup system receives a set of reflectances, thereby tracking and following a position along a recording medium.

Attached is a marked-up version of the changes being made by the current amendment.

The Examiner rejected claims 1-30 under 35 U. S. C. 103(a) as being unpatentable over U. S. Patent 6,246,535 (Saliba '535) in view of Japanese Patent JP11339254A (Saliba JP).

With regard to claim 1, neither Saliba '535 nor Saliba JP teach or suggest servoing the optical pickup system to the recording medium. Rather, as admitted by the Examiner, Saliba '535 teaches the system 100 depicted in FIG. 5 maintains a data transfer mechanism, such as read/write substrate 108, in a known spatial relationship with the optical servo head 11, thereby allowing for alignment of the data transfer mechanism. See Saliba '535 col. 9, lines 17-22.

The Examiner cites Saliba JP as providing a closed loop system for an optical servo head positioning control. However, Saliba JP also fails to disclose or suggest the feature that is absent in Saliba '535, i.e., servoing the optical pickup system to the recording medium.

Moreover, a person skilled in this art would not have been motivated to combine Saliba '535 and Saliba JP to provide servoing the optical pickup system to the recording medium since both references servo a recording head to the recording medium.

Consequently, claim 1 is patentable over Saliba '535 in view of Saliba JP.

For the reasons set forth above, Saliba '535 and Saliba JP do not render claims 2-8,

which depend from claim 1, as obvious.

With regard to independent claims 9 and 20, neither Saliba '535 nor Saliba JP teach or suggest servo means for driving the optical pickup system to a desired position (claim 9) or driving the optical pickup system to a desired position (claim 20). For the reasons set forth above, claims 9 and 20 are patentable over Saliba '535 in view of Saliba JP. For at least the same reasons, Saliba '535 and Saliba JP do not render claims 10-19 and 21-30, which depend from claims 9 and 20, as obvious.

Applicant asks that all claims be allowed. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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Version with markings to show changes made

Please replace the paragraph beginning at page 5, line 23 with the following rewritten paragraph:

Referring to FIG. 3, the read/write head assembly 14 includes the recording head 20 and the optical pickup system 22. An actuator 50 is shown connected to the read/write head assembly 14. In operation, the magnetic tape 18 moves across the magnetic recording head 20 and a set of four data tracks (not shown) are recorded or read from the tape. In one example of a write, the front side 42 of the magnetic tape 18 receives data on its recording tracks 34d, 36d, 38d and 40d(of FIG. 2A) from a series of recording channels 26, 28, 30 and 32 residing on the recording head 20. The optical pickup system 22 utilizes a servo track 46d on the backside 44 of the magnetic tape 18 to detect LTM of the magnetic tape 18 along an axis [54] 52. Compensation is then done by positioning of the read/write head assembly 14 via movement of the actuator 50. Any of the individual optical tracks 46a-46e is used one at a time for "track following" during a recording event.

Please replace the paragraph beginning at page 8, line 3 with the following rewritten paragraph:

Referring to FIG. 8 a graph is shown to illustrate a time progression as the three optical spots 80, 82, and 84 traverse across a multitude of tracks 112-116. Specifically, track 112 is represented by a row of marks in a solid track 118, track [106] 114 is represented by a row of marks in a solid track 120, and track [110] 116 is represented by a row of marks in a solid track 122. As discussed above, each row of marks appears as a solid line, i.e., zone, as the magnetic tape streams past the recording head 20 and the optical pickup system 22; this solid line of marks is seen as the shaded solid tracks 118, 120 and 122.

In the claims:

Claims 1, 4, 9 and 20 has been amended as follows:

1. (Amended) A triple push pull optical tracking method comprising:

receiving a set of three reflectance values from three optical spots on a recording medium in an optical pickup system;

generating three S-curves by pair-wise subtraction of reflectance values;

generating a linear position estimate by processing the S-curves; and

[serving a recording head] servoing the optical pickup system to the recording medium.

4. (Amended) The method of claim 1 wherein [serving the recording head] servoing the optical pickup system comprises comparing a desired position of the [recording head] optical pickup system to a measured position from the linear position estimate.

9. (Amended) A triple push-pull system for generating a composite signal in a closed loop servo signal of a data recording system [to drive a recording head to any given position within any given track] comprising:

an optical pickup system [means] for generating three optical spots focused on a recording medium, the spots separated by equal distances across a track, the optical pickup system [means] receiving a set of reflectances from the three spots;

media means for providing the servo tracks responsive to optical spot illumination;

electronic means for generating a set of three filtered signals from the three reflectances and generating a set of three S-curves by pair-wise subtraction of the filtered signals;

processing means to generate a composite servo position signal from the S-curves and filtered reflectances; and

servo means for driving the [recording head] optical pickup system to a desired position by comparing the desired position to a measured position from the composite servo position.

20. (Amended) A method of generating a composite signal in a closed loop servo signal of a data recording system [to drive a recording head to any given position within any given track] comprising:

generating in an optical pickup system three optical spots focused on a recording medium,

the spots separated by equal distances across a track;

receiving a set of reflectances from the three spots;

generating a set of three filtered signals from the three reflectances;

generating a set of three S-curves by pairwise subtraction of the filtered signals;

generating a composite servo position signal from the S-curves and filtered reflectances; and

driving the [recording head] optical pickup system to a desired position by comparing the desired position to a measured position from the composite servo position.